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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,027	04/01/2004	Mikio Ishii	450100-05005	9327

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EXAMINER	
HOLDER, ANNER N	
ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/816,027	ISHII ET AL.	
	Examiner	Art Unit	
	Anner Holder	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04/01/04* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 4, 6, 7, 9, 11, 12-14, 16, 18, 19-21, 23 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (Miller) US 5,146,324.

3. As to claim 1, Miller teaches a compression encoder which compresses first and second digital image signals having frame rates different from each other, based on a same encoding system, comprising: a dividing section which divides the inputted digital image signals into plural macro blocks of orthogonal-transformation blocks; [Col. 5 Lines 5-13] a shuffling section which rearranges the macro blocks divided by the dividing section; [Fig. 1 (10); Col. 5 Lines 11-14] and a compression-encoding section which compression-encodes the digital image signals every macro block unit consisting of plural macro blocks rearranged by the shuffling section, [Fig. 1 (45)] wherein the shuffling section rearranges the macro blocks of the first digital image signals, based on a method of rearranging the macro blocks of the second digital image signals. [Fig. 1 (10); Col. 5 Lines 11-20]

Miller does not explicitly disclose a first signal and a second signal with different frame rates.

However, Miller teaches an input signal having a variable frame rate of D_{in}. [Col. 3 Lines 51-54] D_{in} encompasses digital image signal with different frame rates (first, second, ..., nt^h signals), which uses the same shuffling rearrangement of the macroblocks for all signals, which would make it obvious to one of ordinary skill in the art at the time the invention was made to utilize Miller's compression encoder for different signals with different frame rates.

4. As to claim 2, Miller teaches the shuffling section rearranges the divided macro blocks of the second digital image signals into a layout in which the divided macro blocks of the second digital image signals are arranged mutually in a dispersed position. [Col. 5 Lines 11-20]

5. As to claim 4, Miller teaches the compression-encoding section compression-encodes the digital image signals, based on a 4:2:2 format or 4:4:4 format. [Col. 4 Lines 20-25]

6. As to claim 6, see rejection of claim 1, except this is a claim to a compression-encoding method with the same limitations as claim 1.

7. As to claim 7, see rejection of claim 2, except this is a claim to a compression-encoding method with the same limitations as claim 2.

8. As to claim 11, Miller teaches a recorder which compresses first and second digital image signals having frame rates different from each other, based on a same encoding system, [See discussion in rejection of claim 1] and records the digital image signals compressed, onto a recording medium, comprising: a dividing section which divides the inputted digital image signals into plural macro blocks of orthogonal-transformation blocks; [Col. 5 Lines 5-13] a shuffling section which rearranges the macro blocks divided by the dividing section, in units of macro block units each including plural macro blocks; [Fig. 1 (10); Col. 5 Lines 11-14] a compression-encoding section which compression-encodes the digital image signals every macro

block unit consisting of plural macro blocks rearranged by the shuffling section; [Fig. 1 (45)] and a recording section which records the digital image signals [Abstract; Col. 1 Lines 7-15; Col. 3 Lines 34-37] compression-encoded by the compression-encoding section, assigning the digital image signals to each track of the recording medium, for every macro block unit, wherein the shuffling section rearranges the macro blocks of the first digital image signals based on the method of rearranging the macro blocks of the second digital image signals. [Fig. 1 (10); Col. 1 Lines 7-15; Col. 5 Lines 1-5, 11-20; Abstract; Col. 3 Lines 44-48; Col. 4 Lines 50-62; Col.7 Lines 4-8]

9. As to claim 12, Miller teaches the shuffling section forms the macro block units each of those plural macro blocks that are divided by the dividing section and discretely exist in a frame. [Col. 5 Lines 11-20]

10. As to claim 13, Miller teaches the recording section selects one or more macro block units to be assigned to each track of the recording medium. [Col. 1 Lines 7-15; Col. 3 Lines 44-48; Col. 4 Lines 50-62; Col.7 Lines 4-8]

11. As to claim 14, Miller teaches the recording section assigns the macro block units to each track of the recording medium, positioning discretely those macro blocks that are divided by the dividing section and are adjacent to each other. [Col. 1 Lines 7-15; Col. 3 Lines 44-48; Col. 4 Lines 50-62; Col.7 Lines 4-8]

12. As to claim 16, see rejection of claim 4, except this is a claim to a recorder with the same limitations as claim 4.

13. As to claim 18, see rejection of claim 11, except this is a claim to a recording method with the same limitations as claim 11.

14. As to claim 19, see rejection of claim 12, except this is a claim to a recording method with the same limitations as claim 12.

15. As to claim 20, see rejection of claim 13, except this is a claim to a recording method with the same limitations as claim 13.

16. As to claim 21, see rejection of claim 14, except this is a claim to a recording method with the same limitations as claim 14.

17. As to claim 23, see rejection of claim 16, except this is a claim to a recording method with the same limitations as claim 16.

18. As to claim 25, Miller teaches a compression encoder which compresses first and second digital image signals having frame rates different from each other, based on a same encoding system, [See discussion in rejection of claim 1] comprising: a dividing section which divides the first digital image signals into plural macro blocks as well as the second digital image signals into plural macro blocks; [Col. 5 Lines 5-13] a shuffling section which rearranges the plural macro blocks of the second digital image signals divided by the dividing section, based on a layout of the plural macro blocks of the first digital image signals divided by the dividing section, into a layout of macro blocks which is equivalent to that of the first digital image signals; [Fig. 1 (10); Col. 5 Lines 11-14; Fig. 1 (45)] and a compression-encoding section which compression-encodes the digital image signals every macro block unit consisting of plural macro blocks rearranged by the shuffling section. [Fig. 1 (10); Col. 5 Lines 11-20]

19. As to claim 26, see rejection of claim 25, except this is a claim to a Compression-encoding method with the same limitations as claim 25.

20. As to claim 27, Miller teaches a recorder which compresses first and second digital image signals having frame rates different-from each other, based on a same encoding system, and records the digital image signals compressed, onto a recording medium, comprising: a dividing section which divides the first digital image signals into plural macro blocks as well as the second digital image signals into plural macro blocks; [Col. 5 Lines 5-13] a shuffling section which rearranges the plural macro blocks of the second digital image signals divided by the dividing section, in units of macro block units each including plural macro blocks, based on a layout of the plural macro blocks of the first digital image signals divided by the dividing section, into a layout of macro blocks which is equivalent to that of the first digital image signals; [Fig. 1 (10); Col. 5 Lines 11-14; Fig. 1 (45)] a compression-encoding section which compression-encodes the digital image signals every macro block unit consisting of plural macro blocks rearranged by the shuffling section; [Fig. 1 (10); Col. 5 Lines 11-20] and a recording section which records the digital image signals, [Abstract; Col. 1 Lines 7-15; Col. 3 Lines 34-37] assigning the digital image signals to tracks of the recording medium, for every macro block unit. [Fig. 1 (10); Col. 1 Lines 7-15; Col. 3 Lines 44-48; Col. 4 Lines 50-62; Col.7 Lines 4-8]

21. As to claim 28, see rejection of claim 27, except this is a claim to a recording method with the same limitations as claim 27.

22. Claims 3, 8, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (Miller) US 5,146,324 in view of Chen et al. (Chen) US 2003/0138051 A1.

23. As to claim 3, Miller teaches the limitations of claim 1.

Miller does not specifically teach the compression-encoding section compression-encodes the first digital image signals having a frame rate of 60 or 59.94 frames/second.

Chen teaches the compression-encoding section compression-encodes the first digital image signals having a frame rate of 60 or 59.94 frames/second. [Pg. 1 ¶ 0003-0004]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chen with the compression device of Miller to allow for accuracy in formatting of data.

24. As to claim 8, see rejection of claim 3, except this is a claim to a compression-encoding method with the same limitations as claim 3.

25. As to claim 15, see rejection of claim 3, except this is a claim to a recorder with the same limitations as claim 3.

26. As to claim 22, see rejection of claim 15, except this is a claim to a recording method with the same limitations as claim 15.

27. Claims 5, 10, 17, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (Miller) US 5,146,324 in view of Porter et al. US 7,227,900 B2.

28. As to claim 5, Miller teaches the limitations of claim 1.

Miller does not specifically teach the compression-encoding section compression-encodes the digital image signals according to an interlace format or a progressive format.

Porter teaches the compression-encoding section compression-encodes the digital image signals according to an interlace format or a progressive format.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the progressive coding teachings of Porter with the compression device of Miller to achieve clearer high-resolution images.

29. As to claim 10, see rejection of claim 5, except this is a claim to a compression-encoding method with the same limitations as claim 5.

30. As to claim 17, see rejection of claim 5, except this is a claim to a recorder with the same limitations as claim 5.

31. As to claim 24, see rejection of claim 17, except this is a claim to a recorder with the same limitations as claim 17.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smidth et al. (US 5,301,018).

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anner Holder whose telephone number is 571-270-1549. The examiner can normally be reached on M-Th, M-F 8 am - 3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANH 09/22/07

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